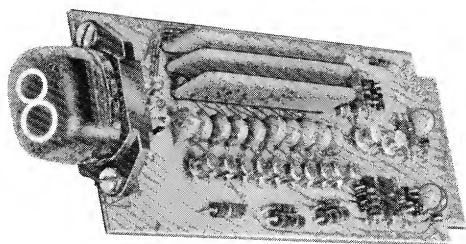




BIPCO[®] MODULE

DECADE COUNTER

Type BIP-8055



BIP-8055

- NIXIE[®] TUBE READOUT
- 150 KC OPERATION
- PRESETTABLE
- ALL SOLID STATE
- RESETTABLE TO ANY NUMBER
- PLUG IN PRINTED CIRCUIT CONSTRUCTION

The BIP-8055 decade counter is a 10-position uni-directional ring counter made up of silicon controlled switches and a self-complementing transistor flip-flop. The unit can count at rates in excess of 150 KC and provides visual indication of the count on an integrally mounted rectangular NIXIE tube, type 8422 (B5991), which is included as part of the module. Ten electrical outputs are available at the printed card terminals to operate printers or perform logical control functions such as preset counting. A carry output is also provided to drive succeeding counters for cascaded multi-decade operation. Preset/reset module BIP-8613 is recommended for resetting and is described in Bulletin 1081.

ELECTRICAL CHARACTERISTICS

INPUT PULSE REQUIREMENTS (Fig. 3, Note 1)

Operating Frequency	DC to 150 KC
Pulse Amplitude	6V to 12V
Pulse Rise Time	0.5 μ sec. max.
Pulse Duration	2.0 μ sec. min.

RESET REQUIREMENTS (Fig. 4)

Amplitude (Positive)	12V $\pm$ 1V
Rise Time	0.5 μ sec. max.
Pulse Duration	5.0 μ sec. min.
Input Impedance	120 Ω nom.

POWER REQUIREMENTS

+200V $\pm$ 10%	2.8 ma. Typical, 4 ma. max.
+12V $\pm$ 10%	29 ma. Typical, 40 ma. max.
-12V $\pm$ 10%	0.6 ma. Typical, 1 ma. max.

OUTPUTS

Decimal Readout (Note 6)	NIXIE Tube, type 8422
Carry Output (Note 2)	
Amplitude (Negative)	7V Typical
Rise Time	0.6 μ sec. Typical
Pulse Duration	Note 3
Carry Delay	1.0 μ sec. max.

Outputs (Terminals H, J, K, L, 9, M, 12, P, 15, S)

Counting Mode:
Full Load (10 K ohms) 7 volt min. negative going pulse from +12V; output measured with respect to ground. Pulse width depends on input frequency.

Non-counting Mode See Note 4

MECHANICAL SPECIFICATIONS

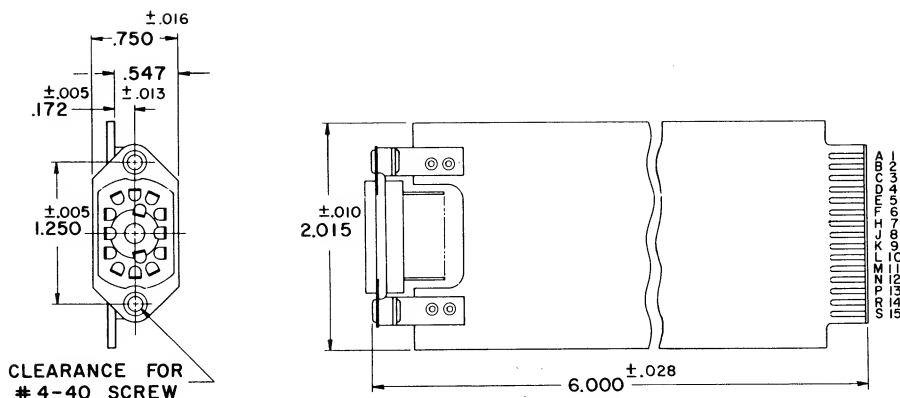
Outline Drawing	Figure 1
Mounting Diagram	Figure 2
Connector	30 contact printed circuit board
Terminal Connections	Table I

Receptacle (Note 5)	SR115 — Figure 6
Weight	2.8 oz.
Component Height	0.575 in. max.
Temperature Operating	0° to +85°C.
Non-operating	-20° to +100°C.

NOTES

1. The input is to a "self-complementing flip-flop" with 240 pf input capacitance.
2. For cascading, terminal 8 (carry out) of the first decade should be connected to terminal 10 (input) of the next decade, etc.
3. Pulse duration is equal to 1/input frequency; e.g., 6.7 μ sec. at 150 KC.
4. Up to 300 ma max. current may be drawn from an "ON" stage output terminal when the counter is not counting, provided pins 13 and 14 are grounded and isolated from one another by diodes. Load must not be applied when counting.
5. The SR115 receptacle is supplied with the key unassembled, it must be inserted between terminals M & N, 11 & 12. Receptacle is not included as part of the module and must be ordered separately.
6. The module will not operate without the NIXIE tube.





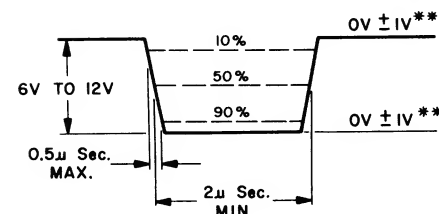
Keyway is between Terminals M & N, 11 & 12.

Figure 1. OUTLINE DRAWING

TERMINAL	CONNECTION	TERMINAL	CONNECTION
A	Reset 1	1	+200 Vdc supply
B	Reset 9	2	Odd Reset
C	Reset 7	3	-12 Vdc supply
D	Reset 2	4	Ground
E	Reset 3	5	Even Reset
F	Reset 4	6	Reset 5
H	Output 1	7	Reset 6
J	Output 2	8	Carry Output
K	Output 3	9	Output 5
L	Output 4	10	Input
M	Output 6	11	+12 Vdc supply
N	Reset 8	12	Output 7
P	Output 8	13	Odd Load Buss*
R	Reset 0	14	Even Load Buss*
S	Output 0	15	Output 9

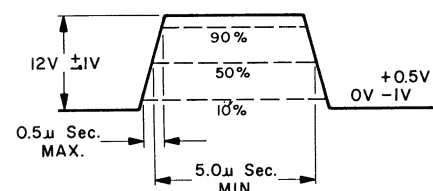
*See Note 4

Table I - TERMINAL CONNECTIONS



**Either level can be 0V

Figure 3. INPUT PULSE (Note 1)



Preset/Reset module BIP-8613 is recommended for resetting, however, the counter can be reset to any number by applying the above pulse to (a) the odd or even reset terminals (2 or 5) and (b) to the appropriate number's reset terminal. Pulses (a) and (b) must be coincident for at least 5 μsec, and input (b) must be isolated by a diode.

Figure 4. RESET PULSE

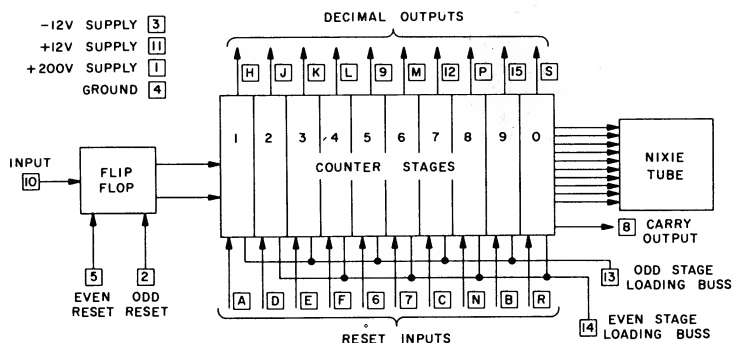


Figure 5. BIP-8055 BLOCK DIAGRAM

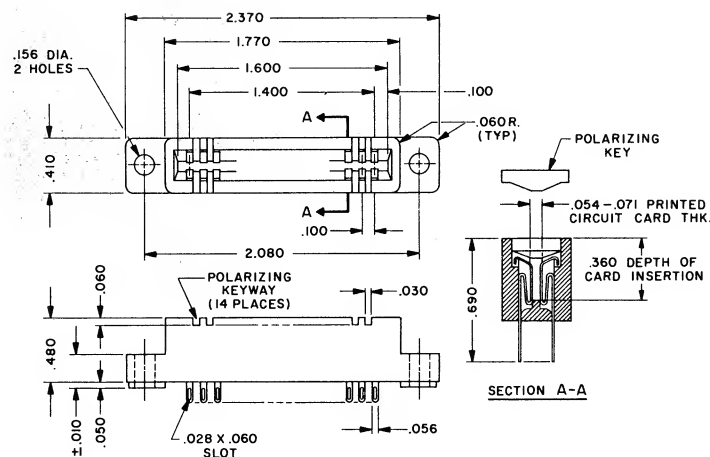


Figure 6. RECEPTACLE SR115 (Note 5)



Burroughs Corporation

ELECTRONIC COMPONENTS DIVISION
PLAINFIELD, NEW JERSEY

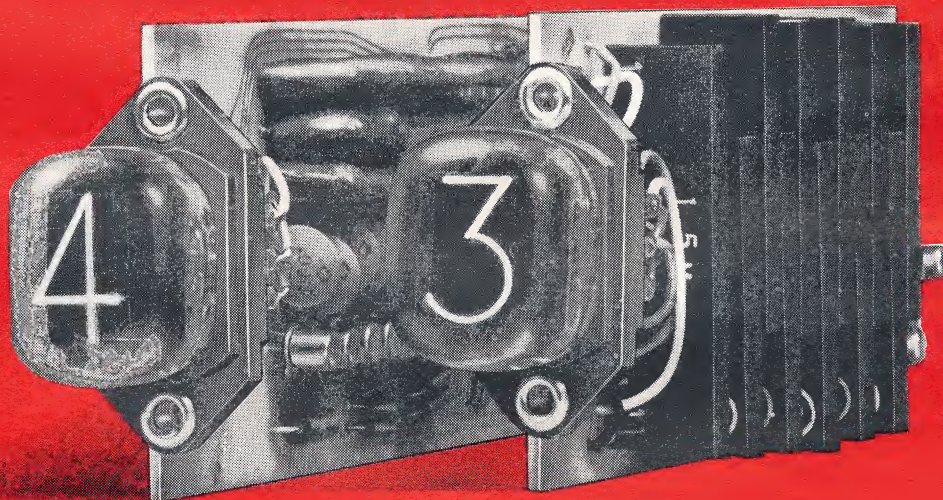
The information contained in this brochure does not necessarily imply a license under patents or pending applications of Burroughs Corp. or assure a freedom from patent rights of others. No warranties of any kind are either expressed or implied by reason of this publication.

new SCS decade counters . . . from Burroughs are compact, highly reliable, high speed electronic counters priced competitively with much slower electromechanical types. This new line of modules, designed around the unique silicon controlled switch, makes electronic counting practical for a wide range of industrial control applications. Compatible support modules are available individually or pre-grouped with the counters in complete multistage assemblies.

with features that give you more . . . Uni-directional 150 KC and bi-directional 110 KC models ■ Nixie® Tube readout ■ Presetable ■ All solid state ■ Resettable to any number ■ Plug in printed circuit construction ■ Support modules available (preset/reset, pre-amplifiers and accumulators).

for a multitude of counting applications . . . Programmable machine tool controls ■ Measuring devices (testing, gauging, etc.) ■ Flow measurement and control ■ Linear measurement monitoring ■ Totalizing ■ X-Y plotting ■ If you have a counting application, investigate the new line of SCS counters from Burroughs.

Write for information on the Uni-directional Counter (BIP-8055) and Bi-directional Counter (BIP-8054).



BIP-8055
Uni-directional Counter

BIP-8054
Bi-directional Counter

NIXIE is a registered trademark of Burroughs Corporation.



Burroughs Corporation

**ELECTRONIC COMPONENTS DIVISION
PLAINFIELD, NEW JERSEY**



BIP-8006
Accumulator



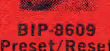
BIP-8211
Socket Pack
Decoder



BIP-8501
Socket Pack
Driver



BIP-8606
Preamplifier



BIP-8609
Preset/Reset



BIP-8054
Bi-directional
Counter



BIP-8055
Uni-directional
Counter



BIP-8503
Memory Driver



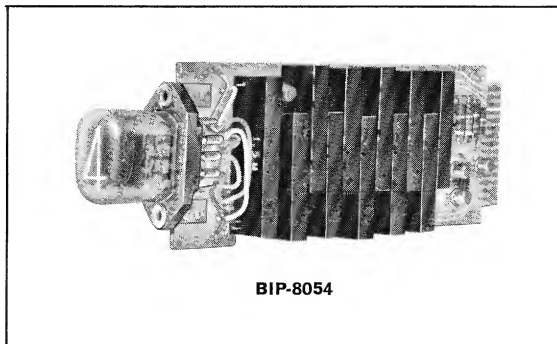
BIP-8404
Memory Decoder



BIPCO® MODULE

BI-DIRECTIONAL DECADE COUNTER TYPE BIP-8054

- NIXIE® TUBE READOUT
- RESETTABLE TO ANY NUMBER
- PLUG-IN PRINTED CIRCUIT CONSTRUCTION
- DECIMAL OUTPUTS
- ALL SOLID STATE
- PRESETTABLE
- 110 KC OPERATION



BIP-8054

The BIP-8054 decade counter is a 10-position bi-directional ring counter which uses silicon controlled switches (SCS) for counting. The unit counts at rates in excess of 110 KC and provides visual indication of the count on an integrally mounted rectangular NIXIE tube, type 8422 (B-5991). Ten inputs, one for each ring stage, are provided so that the decade can be reset to any number. Ten electrical outputs are available at the printed card terminals to operate a printer or perform logical control functions such as preset counting. A carry output is also provided to drive succeeding counters for cascaded multi-decade operation (Fig. 3, Note 2). Also available are support modules (preset/reset, type BIP-8609; preamplifier, type BIP-8606 (Note 5); polarity detector type BIP-8006; etc.) which, together with the BIP-8054 counter, provide a unit capable of accumulating either positive or negative inputs and reversing sign as the count passes through zero in either direction.

ELECTRICAL CHARACTERISTICS

INPUT REQUIREMENTS (Note 1) (Figure 4)

Operating Frequency	DC to 110 KC
Pulse Amplitude (Positive)	12 V $\pm$ 1 V
Pulse Rise Time	0.1 μ sec. max.
Pulse Duration	1.6 μ sec. $\pm$ 5%
Input Current	5 ma max.
Count Direction Command	See Note 1

REVERSING DELAY TIME Note 5

RESET REQUIREMENTS (Figure 5, Note 7)

Amplitude (Positive)	12 V $\pm$ 1 V
Rise Time	0.1 μ sec. max.
Pulse Duration	3 μ sec. min.

OUTPUTS

Visual Decimal Readout NIXIE Tube
Type 8422 (B5991) (Note 6)

Carry Output (Note 2, Figure 6)

Amplitude	12 V $\pm$ 1 V
Rise Time	0.1 μ sec. max.
Pulse Duration	Note 3
Carry Delay	0.1 μ sec. max.

OUTPUTS (Cont.)

Electrical Decimal Outputs (5, E, F, H, 6, J, K, L, M, R)

Counting Mode —

Full Load A 7 volt min. negative going pulse from +12 V, (measured with respect to ground) is available at the 10 output terminals. The resistive load can be reduced to 10 K ohm min. if load is returned to +12 V.

Non-counting Mode Up to 200 ma max. current may be drawn from a +12 V power supply and load through an "ON" stage output terminal when the counter is not counting and pin 10 is grounded. Pin 10 cannot be at ground when counting.

POWER REQUIREMENTS

+200 V $\pm$ 10 V	4 ma max.
+12 V $\pm$ 1 V	15 ma max.
-12 V $\pm$ 1 V	2 ma max.

MECHANICAL SPECIFICATIONS

Outline Drawing	Figure 1
Mounting Diagram	Figure 2
Connector	30 contact printed circuit board
Terminal Connections	Table 1

Receptacle (Note 4)	SR-115 (Figure 8)
Weight	3.0 oz.
Component Height	0.575 in. max.
Temperature — Operating	0° to +85°C
Non-operating	-20° to +100°C

NOTES

- Two DC levels are also necessary and determine the direction of count.
DIRECTION TERMINAL 8 TERMINAL 7
Forward 0 V $\pm$ 1 V -12 V $\pm$ 1 V at 2 ma max.
Reverse -12 V $\pm$ 1 V at 2 ma max. 0 V $\pm$ 1 V
- For cascaded operation when preamplifier BIP-8606 is not used the count input pulse must be coupled to the carry input (terminal 13) by means of an emitter follower or equivalent circuit (see Figure 6), thereby providing essentially simultaneous carry. One emitter follower circuit is necessary for every three decades. See Figure 3 for Multi-Decade Interconnection diagram.

- Pulse duration is equal to the count input pulse duration less the cascade delay time (0.1 μ sec. max.).
- The SR115 receptacle is supplied with the key unassembled, it must be inserted between terminals C and D, 3 and 4 (Figure 8). Receptacle is not included as part of the module and must be ordered separately.
- The input pulse must be delayed 4.0 μ sec. min. on count direction reversal. Preamplifier BIP-8606 performs this function and provides the forward and reverse buss voltages. If the preamplifier is not used, some means of delaying the count pulse must be provided.
- The module will not operate without the Nixie tube.
- All external pulses are referenced to the circuit's +12V supply, and at no time can these pulses exceed the +12V supply.

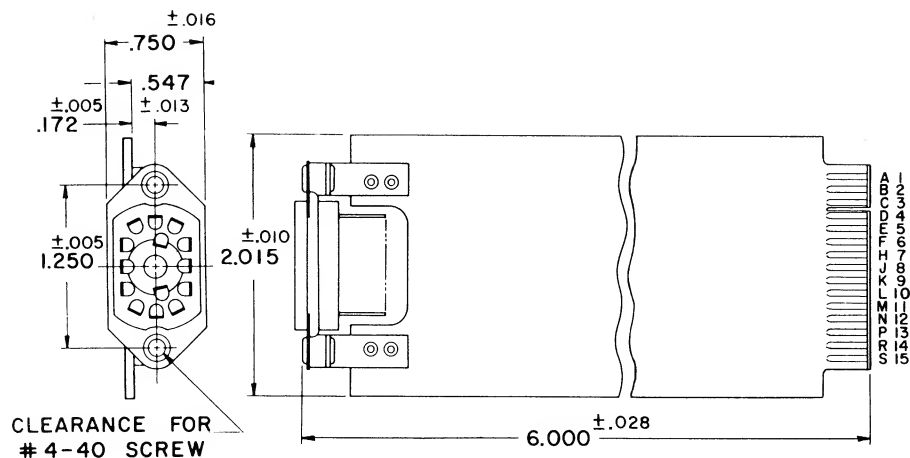


Figure 1. OUTLINE DRAWING

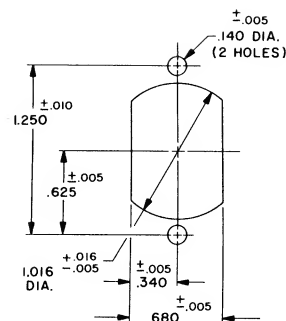


Figure 2. MOUNTING DIAGRAM

TERMINAL	CONNECTION	TERMINAL	CONNECTION
A	Reset 4	1	+200 Vdc
B	Reset 2	2	Reset 1
C	Reset 3	3	Reset 0
D	Ground	4	Not Used
E	Output 1	5	Output 0
F	Output 2	6	Output 4
H	Output 3	7	Reverse Buss**
J	Output 5	8	Forward Buss**
K	Output 6	9	Carry Output
L	Output 7	10	*
M	Output 8	11	Count Input
N	Reset 5	12	+12 Vdc
P	Reset 6	13	Carry Input
R	Output 9	14	Reset 9
S	Reset 7	15	Reset 8

* See Electrical Decimal Outputs — Non-counting Mode.

** See Note 1

Table I - TERMINAL CONNECTIONS

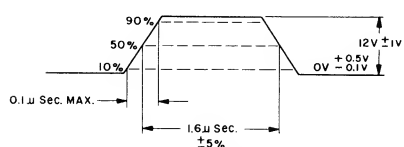


Figure 4. INPUT PULSE

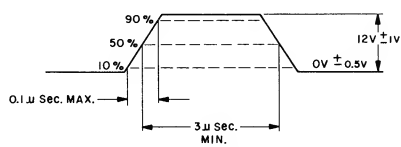


Figure 5. RESET PULSE (See Note 7)

Preset/Reset module BIP-8609 is recommended for resetting and pre-setting, however, the counter can be reset to any number by applying the above pulse to the number's reset terminal.

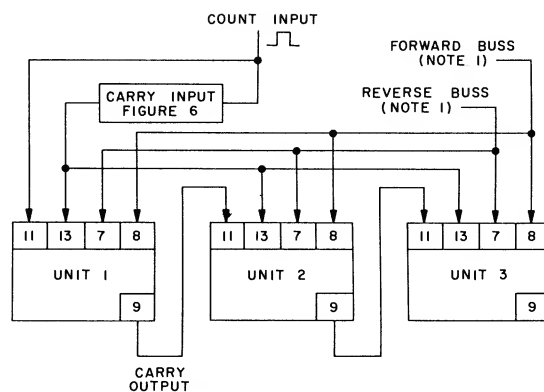


Figure 3. MULTI-DECADE INTERCONNECTION DIAGRAM

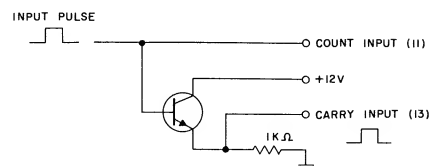


Figure 6. RECOMMENDED CARRY INPUT CIRCUIT (SEE NOTE 2)

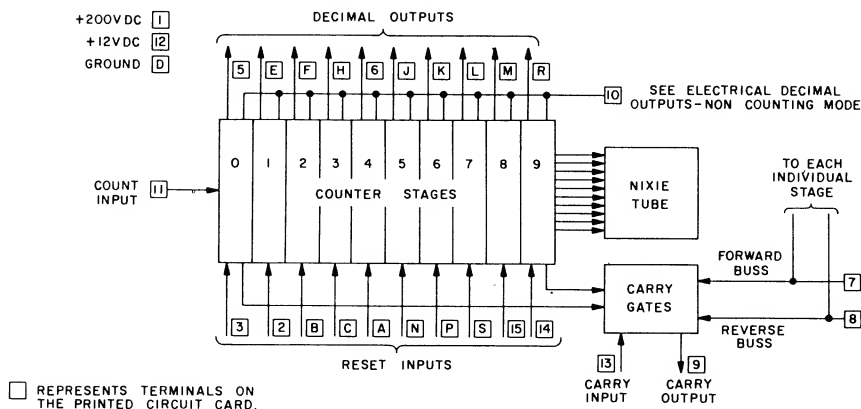


Figure 7. BLOCK DIAGRAM

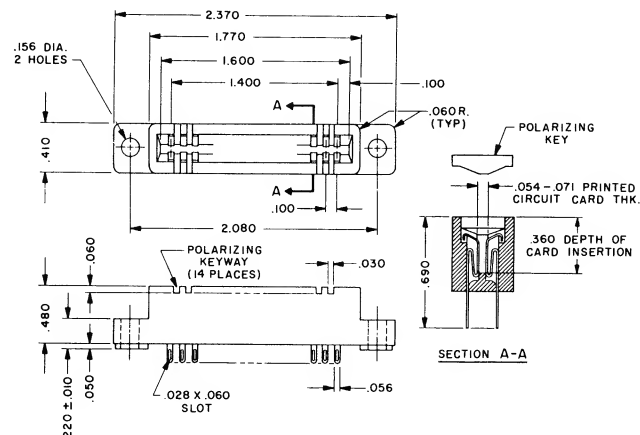


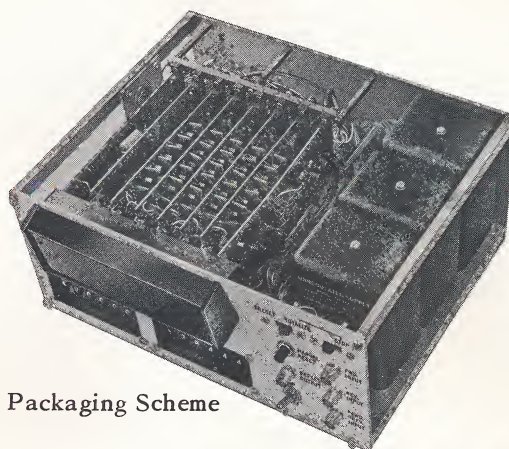
Figure 8. RECEPTACLE SR115 (See Note 4)



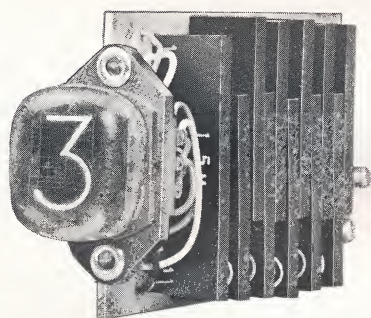
BIPCO[®] MODULE



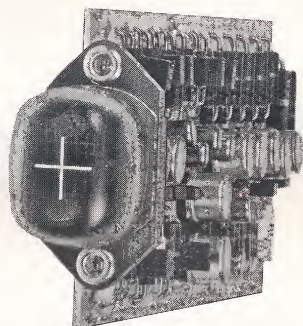
Decimal Accumulator



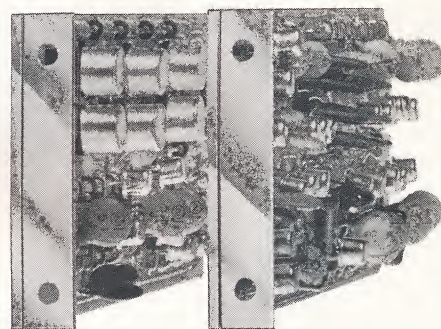
Packaging Scheme



BIP-8054 Bi-directional Counter



BIP-8006 Polarity Detector



BIP-8609
Preset/Reset

BIP-8606
Preamplifier

DECIMAL ACCUMULATOR

- 110 KC BI-DIRECTIONAL COUNTER – BIP-8054
- PREAMPLIFIER BIP-8606

The Burroughs SCS bi-directional counter, type BIP-8054, in conjunction with support modules, (preamplifier, preset/reset and polarity detector modules) form a complete decimal accumulator which is capable of accepting forward (add) or reverse (subtract) pulses and adding them algebraically to the accumulated count. For example, with an accumulated count of "4275," a forward input would increase the count in the positive direction to "4274" while a reverse input would cause the count to decrease in the negative direction to "4276." Polarity indication showing the true state of the accumulator is provided by a plus and minus NIXIE[®] tube.

If the full accumulator function is not required, the counters are available with the preamplifier and/or the preset/reset module to perform functions requiring just straight bi-directional counting or preset/reset.

- PRESET/RESET – BIP-8609
- POLARITY DETECTOR – BIP-8006

The complete accumulator system consists of up to five BIP-8054 counters, a preamplifier, a preset/reset module and a polarity detector as shown above and in the System Block Diagram Fig. 8. All units are of printed circuit construction designed to assemble and package on a building block bases and can mount uniformly behind any panel. The SR-115 receptacle which is compatible with both the counters and the support modules is available on separate order and is provided with unassembled polarizing key for matching to appropriate unit. Bezel assemblies are also available if desired for easy mounting to equipment panels.

Applications for this decimal accumulator are in programmable machine tool controls, measuring devices (testing, gauging, etc.), flow measurement and control, linear measurement monitoring, totalizing, X-Y plotting, etc.

PREAMPLIFIER

Type BIP - 8606

The BIP-8606 Preamplifier operates in conjunction with up to six BIP-8054 bi-directional counters to provide an extremely versatile counter assembly capable of operating from any one of three different inputs (1 line, 2 lines or 3 lines — Figures 1, 2 & 3) It performs the following functions:

1. Drives six BIP-8054 counters.
2. Determines the direction of count, depending on the input signal.
3. Biases the forward and reverse counter busses.
4. Delays the input pulse 4 μ sec. to accommodate count direction reversal. (Note 3)
5. Provides outputs to the plus and minus inputs of the BIP-8006 Polarity Detector for proper count accumulation (determines whether the accumulated count is a positive or negative number).
6. Allows the counter to count in a specific direction regardless of the "input count direction" via two inhibit lines. (Note 2)

ELECTRICAL CHARACTERISTICS

INPUT REQUIREMENTS (1 line — Fig. 1, 2 lines — Fig. 2, 3 lines — Fig. 3)

Voltage (Positive or Negative) 3V to 12V
 Rise and Fall Time 0.5 μ sec. max.
 Input Impedance 10 K ohms

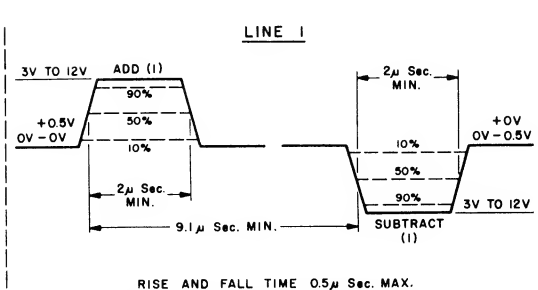
POWER REQUIREMENTS

+200 V DC $\pm$ 10 V 3 ma max.
 +12 V DC $\pm$ 1 V 100 ma max.
 -12 V DC $\pm$ 1 V 50 ma max.

CARRY OUTPUT (Note 1) 0 to +12 V pulse,
 1.6 $\pm$ 5% μ sec. duration

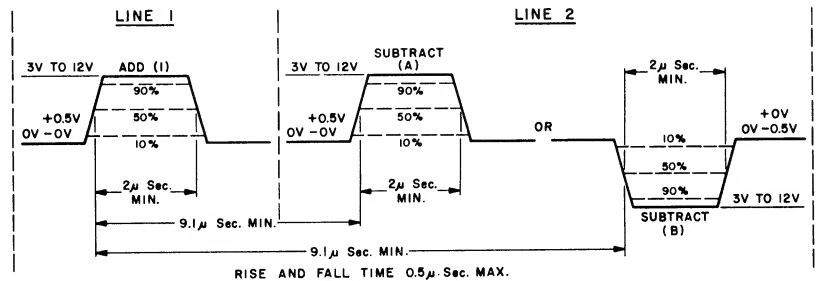
NOTES

1. For cascading up to six counters: (1) terminals R, S and M are tied together and connected to Pin 13 of all counters (except the last); (2) terminal P is connected to terminal 11 of the first counter. See System Block Diagram (Fig. 8). This output pulse is a 0 to +12V, 1.6 $\pm$ 5% μ sec. pulse (0.1 μ sec. rise and fall time).
2. Two direction inhibit lines (terminals E and C) are provided which can override the input count direction. If terminal E is at ground, the counter will count only in the forward direction. If terminal C is at ground, the counter will count only in the reverse direction.
3. For 3 line input count direction reversal, the leading edge of a forward (or reverse) pulse must occur at least 6 μ sec. after the trailing edge of the count pulse and before the next count pulse occurs.



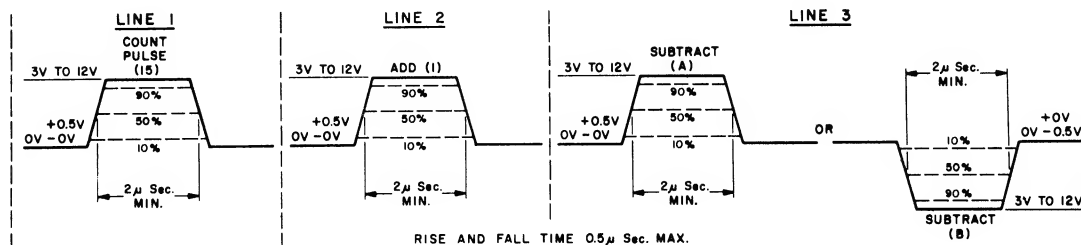
Positive Pulses add (forward) (Apply pulses to terminal 1)
 Negative Pulses subtract (reverse) (Apply pulses to terminal 1)
 Tie terminal 1 to terminal B and
 tie terminal 2 to terminal 15.

Figure 1. ONE LINE INPUT



Positive Pulses add (Apply to terminal 1)
 Positive Pulses subtract (Apply to terminal A) OR
 Negative Pulses subtract (Apply to terminal B)
 Tie terminal 2 to terminal 15.

Figure 2. TWO LINE INPUT



Positive Pulses to count (Apply to terminal 15)
 Positive Pulses to add (Apply to terminal 1)
 Positive Pulses subtract (Apply to terminal A) OR
 Negative Pulses subtract (Apply to terminal B)

Figure 3. THREE LINE INPUT

PRESET/RESET Type BIP-8609

The BIP-8609 preset/reset module works in conjunction with the BIP-8054 Bi-directional counter and will preset and reset up to six counters or five counters and one BIP-8006 Polarity Detector. By using this

module many modes of operation are available; for example, (1) Preset Only, (2) Automatic Preset to Reset and (3) Manual (external) Preset to Reset (see Notes 2, 3 and 4.)

ELECTRICAL CHARACTERISTICS

INPUT REQUIREMENTS

Preset Note 1
Reset Notes 3 and 4
Reset Input Impedance 10 K ohms

OUTPUTS

Preset at Terminal L 5 ma max. (Note 2a)
Preset at Terminal S 5 ma max. (Note 2b)

POWER REQUIREMENTS

+12 V DC 50 ma max.

NOTES

1. The preset inputs are from the six BIP-8054 counter output terminals (Table 1). If not all six preset inputs are used, the unused terminals must be grounded.
2. Preset Only Mode – a. A 0 to +6 volt pulse, 3 μ sec. duration, is available at Pin L when the counter has reached the preset number.
b. A negative going +12 V to +1V pulse is available at Pin S when the counter has reached its preset number. This pulse starts at the time of preset and remains in the +1V state until either a reset occurs or another input pulse is applied to the counter.
3. Automatic Preset to Reset Mode – Terminals 3 and M must be tied together and inter-connections are as shown in Table 1. Connections to the BIP-8609 reset terminals (15, 14, 13, 12, 11 and 9) are from the BIP-8054 counters' reset outputs.
4. Manual Preset to Reset Mode – A 0 to +12 V pulse 3 μ sec. minimum duration (Note 5) must be applied to terminal 3 (terminal M open). Connections to the BIP-8609 reset terminals (15, 14, 13, 12, 11 and 9) are from the BIP-8054 counters' reset outputs.
5. All external pulses are referenced to the circuit's +12 V DC supply voltage and at no time can the pulse amplitude exceed this +12V DC supply voltage.
6. If seven counters, or six counters and a polarity detector are used at 110 KC, terminals H and F can be used for presetting and resetting. However, external "AND" gates must be provided.

POLARITY DETECTOR Type BIP-8006

The BIP-8006 Polarity Detector operates in conjunction with the BIP-8054 counter and the BIP-8606 Preamplifier. It drives an integrally mounted rectangular "plus" and "minus" NIXIE tube type B-5992 and is capable of gating five counters (Note 1) for polarity

detection. It also governs the counter with respect to proper count direction; i.e., count algebraically. If the count is negative, a "forward pulse" will make the number less negative and a "reverse pulse" will make the number more negative.

ELECTRICAL CHARACTERISTICS

INPUTS

To terminals B, C, D, E and F
Inputs are from the "0" outputs of the BIP-8054 counter(s).

To terminals 10 and 11
Inputs are from terminals 3 and 9 of the BIP-8606 Preamplifier.

POWER REQUIREMENTS

+200 Vdc 2 ma
+12 Vdc 60 ma
-12 Vdc 15 ma

OUTPUTS

At terminals M and S
Two outputs are used in conjunction with the BIP-8606 Preamplifier and effectively "steer" the count direction depending on the accumulative count being positive or negative (Fig. 8).

NOTES

1. For gating more than five counters, terminals 2 and 7 can be used, however, external "AND" gates are necessary.

MECHANICAL SPECIFICATIONS

Outline Drawings Fig. 4 and 6
Mounting Diagram (BIP-8006) Fig. 5
Connector 30 contact printed circuit board

Terminal Connections Tables 2, 3 and 4
Receptacle SR-115 (Fig. 7)
Temperature – Operating 0° to +85°C
Non-operating -20° to +100°C

TERMINAL CONNECTIONS

A	Reverse Input (Figs. 2 & 3)
B	One Line Input (Figs. 1, 2 & 3)
C	Bias Output (5, 6)
D	Reverse Input Bias (5)
E	Clamp Output (6)
F	Not Normally Used
H	Forward Buss (3)
J	Reverse Buss (3)
K	Forward Input Bias (5)
L	Not Used
M	Gate Output (Note 1)
N	+200 V DC
P	Count Output (Note 1)
R	First Carry (Note 1)
S	Second Carry (Note 1)
1	Forward Input (Figs. 1, 2 & 3)
2	Count Output (Figs. 1, 2 & 3)
3	"+" NIXIE Tube Input (5)
4	Not Used
5	Not Used
6	Not Used
7	Not Used
8	Not Used
9	"-" NIXIE Tube Input (5)
10	+12 V DC
11	Not Used
12	Not Used
13	-12 VDC
14	Ground
15	Count Input (Figs. 1, 2 & 3)

Table 2. BIP-8606 PREAMPLIFIER
() = Functions for BIP-8606 Page 2.

A	Second Preset (1)
B	Third Preset (1)
C	Fourth Preset (1)
D	Fifth Preset (1)
E	Not Used
F	(6)
H	(6)
J	Sixth Preset (1)
K	+12 V DC
L	Preset Output (2a)
M	Mono Output (3)
N	Not Used
P	Not Used
R	Not Used
S	Preset Gate (2b)
1	First Preset (1)
2	Ground
3	Ext. Reset Input (3)
4	Not Used
5	Not Used
6	Not Used
7	Not Used
8	Not Used
9	Sixth Reset (3, 4)
10	Not Used
11	Fifth Reset (3, 4)
12	Fourth Reset (3, 4)
13	Third Reset (3, 4)
14	Second Reset (3, 4)
15	First Reset (3, 4)

Table 3. BIP-8609 PRESET/RESET
() = Notes on BIP-8609 Page 3.

A	+12 V DC
B	1st Counter "0" Output
C	2nd Counter "0" Output
D	3rd Counter "0" Output
E	4th Counter "0" Output
F	5th Counter "0" Output
H	-12 V DC
J	Clamp Output
K	Bias Input
L	+200 V DC
M	Reverse Bias Output
N	Not Used
P	Not Used
R	Not Used
S	Forward Bias Output
1	Not Used
2	AND Gate Output
3	Not Used
4	Not Used
5	Not Used
6	Not Used
7	Zener Bias Output
8	"-" Reset
9	"+" Reset
10	"+" Input
11	"-" Input
12	"+" Preset
13	"-" Preset
14	Ground
15	Not Used

Table 4. BIP-8006 POLARITY DETECTOR

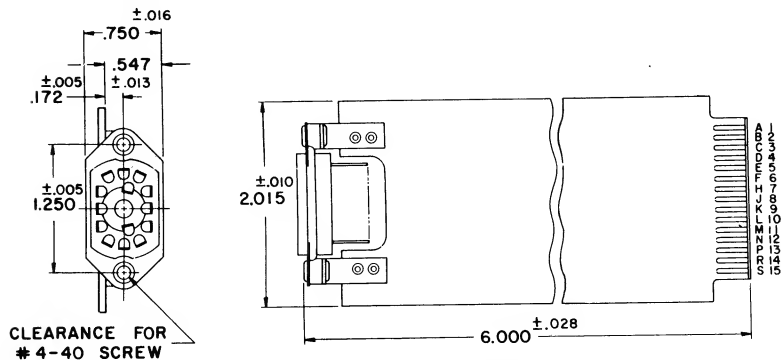
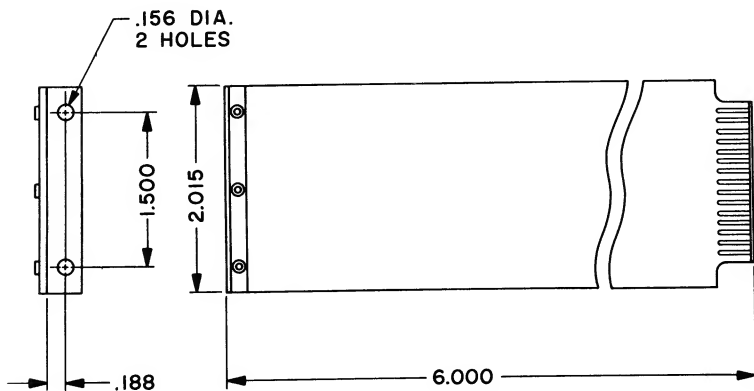
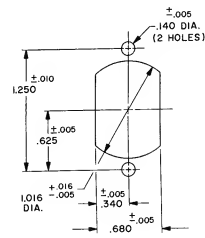


Figure 4. OUTLINE DRAWING BIP-8006 POLARITY DETECTOR



**Figure 6. OUTLINE DRAWING
BIP-8606 PREAMPLIFIER AND BIP-8609 PRESET/RESET**



**Figure 5. MOUNTING DIAGRAM
FOR BIP-8006**

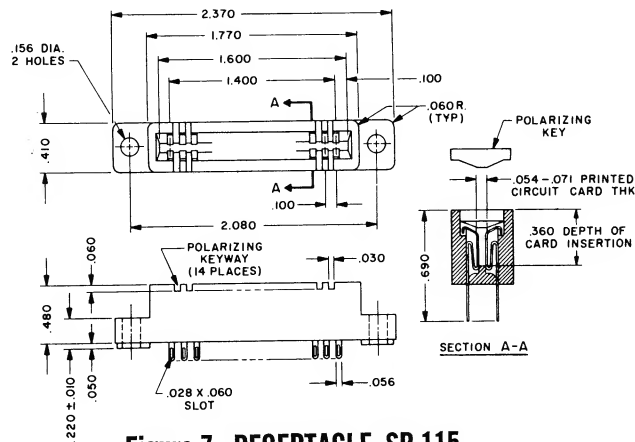


Figure 7. RECEPTACLE SR-115



Burroughs Corporation

ELECTRONIC COMPONENTS DIVISION

PLAINFIELD, NEW JERSEY

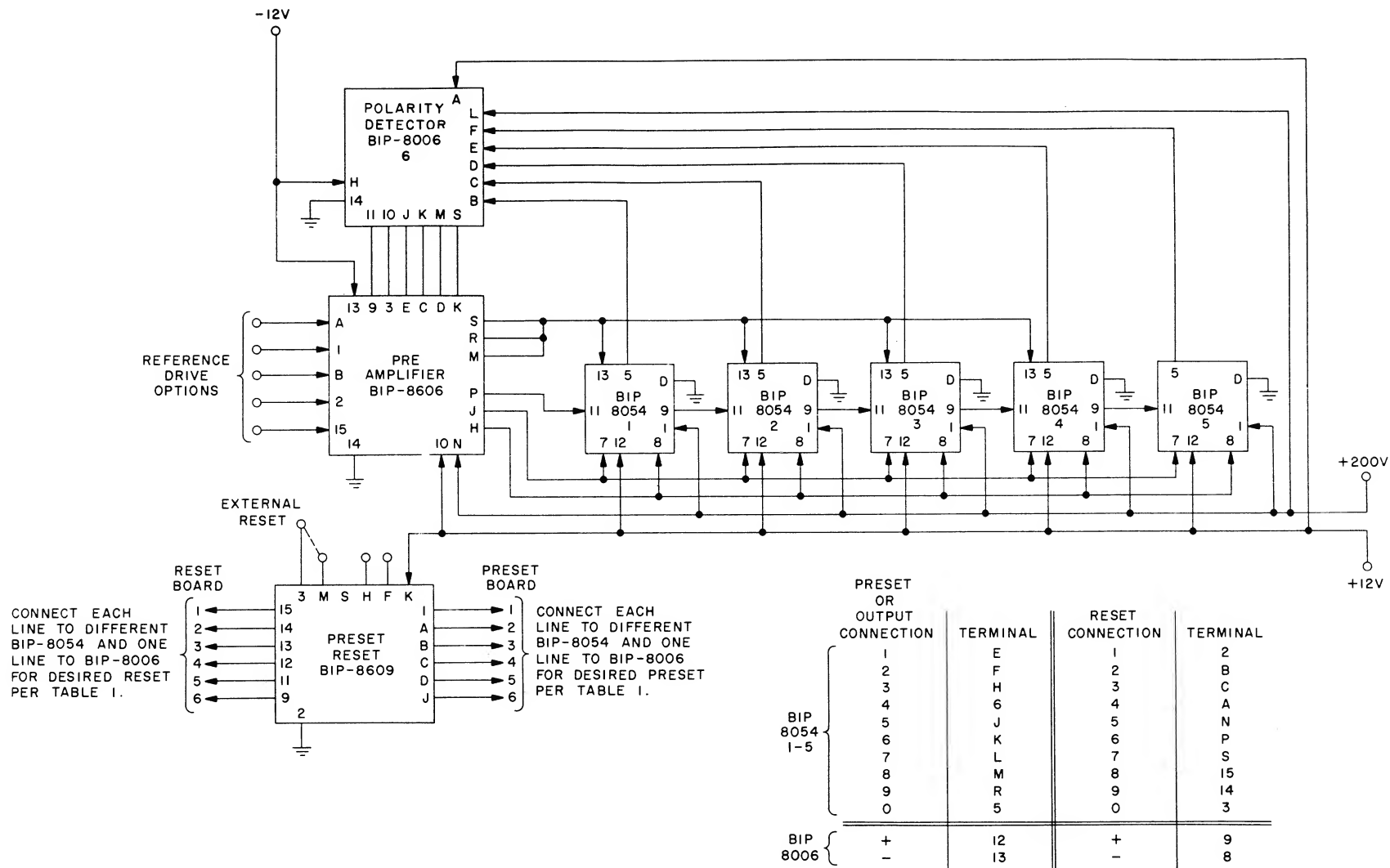


TABLE 1

Figure 8. SYSTEM BLOCK DIAGRAM

developments

The enclosed literature which you requested covers some of our latest developments. However, new products are constantly being introduced...existing product lines are being expanded and improved...engineering ideas are taking new forms.

We'd like to keep you informed about these developments. Our nationwide system of field representatives are trained, and eager to discuss them with you.

John Turnbull
Product Services Manager

Just check the card below and we'll take the initiative from there.



- a. Keep me informed on all developments.
- b. I also need applications assistance (outline requirements below).
- c. Have your representative call.

Name

Title

Company

Address

T. Nelson
Systems Consultant
Box 1546
Poughkeepsie, New York 12601
C

JUN 1 1965

Remarks:



No
Postage Stamp
Necessary
If Mailed in the
United States

BUSINESS REPLY MAIL

First Class Permit No. 260 Plainfield, N. J.

POSTAGE WILL BE PAID BY

Burroughs Corporation



ELECTRONIC COMPONENTS DIVISION

P.O. BOX NO. 1226

PLAINFIELD, NEW JERSEY



your Burroughs representative is only as far as the nearest phone!

Richardson, Texas
Arnold Barnes Company
ADams 5-4541
TWX - 214-231-1405

Denver, Colorado
Brooks, Feeger Association
934-5578
TWX - 303-292-2984

Wakefield, Massachusetts
Instrument Dynamics, Inc.
245-5100
TWX - 617-245-7479

Albany, New York
J. A. Reagan Company, Inc.
518-436-9649
TWX - 518-474-3237

Indianapolis, Indiana
R. O. Whitesell & Assoc., Inc.
Fleetwood 9-5374
TWX - 317-635-9766

Philadelphia, Pennsylvania
Eastern Instrumentation, Inc.
WAverly 7-6269

St. Louis, Missouri
Engineering Services Company
Parkview 6-2233
TWX - 314-556-0173

Chicago, Illinois
Lang, Claeson & Assoc.
312-774-3610
TWX - 312-265-1433

Minneapolis, Minnesota
Merrill Franklin Company
612-827-5348
TWX - 612-321-0616

Silver Spring, Maryland
L. G. White & Co., Inc.
301-585-3141
TWX - 301-439-2200

Seattle, Washington
Stanley Enterprises
723-3320
TWX - 206-998-0491

Los Angeles, California
Tech-Ser, Inc.
WEBster 7-0780
TWX - 213-937-2788

Detroit, Michigan
Hilltronics, Inc.
313-272-4320
TWX - 313-342-0883

St. Petersburg, Florida
ECRA, Inc.
391-9735
TWX - 813-391-9368

New York Metropolitan Area
Division Sales & Service
201-757-5000
TWX - 201-756-5039

Burroughs Corporation



**ELECTRONIC
COMPONENTS
DIVISION**

PLAINFIELD, NEW JERSEY

Our SCS Counter is Bi-directional BIP-8054 si retnuoC SCS ru0



but that's just part of the story.

Our new counter, the BIP-8054, takes advantage of the remarkable planar passivated silicon controlled switch to give you a completely reversible decade counter that is fast (operates to 110 KC and there's no cascade delay time) — highly reliable (only ten active components greatly reduce circuit complexity and over-all component count) — flexible (it counts up or down in response to a command pulse on the control line or as directed by non-coincident pulses in forward and reverse lines) — low cost (under \$100 in small quantities and price includes NIXIE® Tube readout making it ideal for control applications such as machine tool control, X-Y plotting, etc. which until now were tied to electromechanical techniques because of the high cost of electronic devices).

Write for complete specifications on our SCS counters. These reversible counters are so good, they get you coming and going.



Burroughs Corporation /

ELECTRONIC COMPONENTS DIVISION
PLAINFIELD, NEW JERSEY